alemtuzumab, or ofatumumab), bone marrow transplant, experimental therapy, or radiotherapy is prohibited during therapy on this study. 18. Use of medications known to prolong QTc interval or that may be associated with Torsades de Pointes (refer to Appendix F) are prohibited within 7 days of starting study drug and during study-drug treatment.

The examples and embodiments described herein are illustrative and various modifications or changes suggested to persons skilled in the art are to be included within this disclosure. As will be appreciated by those skilled in the art, the specific components listed in the above examples may be replaced with other functionally equivalent components, e.g., diluents, binders, lubricants, fillers, and the like.

What is claimed is:

**1**. A crystalline form of 1-((R)-3-(4-amino-3-(4-phenoxyphenyl)-1H-pyrazolo[3,4-d]pyrimidin-1-yl)piperidin-1-yl) prop-2-en-1-one that has a differential scanning calorimetry (DSC) thermogram having an endotherm with a peak at about 157° C.

**2**. The crystalline form of claim **1**, wherein the endotherm has an onset at about 154° C.

**3**. The crystalline form of claim **1**, wherein the DSC thermogram further comprises an exotherm at about 159° C.

**4**. The crystalline form of claim **1**, wherein the crystalline form is unsolvated.

**5**. The crystalline form of claim **2**, wherein the crystalline form is unsolvated.

**6**. The crystalline form of claim **3**, wherein the crystalline form is unsolvated.

**7**. The crystalline form of claim **1**, wherein the crystalline form has a thermo-gravitrimetric analysis (TGA) thermogram substantially similar to the one set forth in FIG. **4**.

**8**. The crystalline form of claim **2**, wherein the crystalline form has a thermo-gravitrimetric analysis (TGA) thermogram substantially similar to the one set forth in FIG. **4**.

**9**. The crystalline form of claim **3**, wherein the crystalline form has a thermo-gravitrimetric analysis (TGA) thermogram substantially similar to the one set forth in FIG. **4**.

**10**. The crystalline form of claim **4**, wherein the crystalline form has a thermo-gravitrimetric analysis (TGA) thermogram substantially similar to the one set forth in FIG. **4**.

**11**. The crystalline form of claim **5**, wherein the crystalline form has a thermo-gravitrimetric analysis (TGA) thermogram substantially similar to the one set forth in FIG. **4**.

**12**. The crystalline form of claim **6**, wherein the crystalline form has a thermo-gravitrimetric analysis (TGA) thermogram substantially similar to the one set forth in FIG. **4**.

**13**. The crystalline form of claim **1**, wherein the DSC thermogram was generated by heating the crystalline form at a rate of 10° C./min.

**14**. The crystalline form of claim **4**, wherein the DSC thermogram was generated by heating the crystalline form at a rate of 10° C./min.

**15**. A crystalline form of 1-((R)-3-(4-amino-3-(4-phenoxyphenyl)-1H-pyrazolo[3,4-d]pyrimidin-1-yl)piperidin-1-yl)prop-2-en-1-one that has an X-ray powder diffraction (XRPD) pattern comprising a 2-Theta peak at about 18.9°.

**16**. The crystalline form of claim **15**, wherein the XRPD pattern further comprises a 2-Theta peak at about 16.1°.

**17**. The crystalline form of claim **15**, wherein the XRPD pattern further comprises a 2-Theta peak at about 21.6°.

**18**. The crystalline form of claim **15**, wherein the crystalline form is unsolvated.

**19**. The crystalline form of claim **16**, wherein the crystalline form is unsolvated.

**20**. The crystalline form of claim **17**, wherein the crystalline form is unsolvated.

**21**. A crystalline form of 1-((R)-3-(4-amino-3-(4-phenoxyphenyl)-1H-pyrazolo[3,4-d]pyrimidin-1-yl)piperidin-1-yl)prop-2-en-1-one that has an XRPD pattern comprising a 2-Theta peak at about 5.7°.

**22**. The crystalline form of claim **21**, wherein the XRPD pattern further comprises a 2-Theta peak at about 16.1°.

**23**. The crystalline form of claim **21**, wherein the XRPD pattern further comprises a 2-Theta peak at about 18.9°.

**24**. The crystalline form of claim **21**, wherein the XRPD pattern further comprises a 2-Theta peak at about 21.6°.

**25**. The crystalline form of claim **21**, wherein the crystalline form is unsolvated.

**26**. A crystalline form of 1-((R)-3-(4-amino-3-(4-phenoxyphenyl)-1H-pyrazolo[3,4-d]pyrimidin-1-yl)piperidin-1-yl)prop-2-en-1-one that has an XRPD pattern comprising a 2-Theta peak at about 21.3°.

**27**. A pharmaceutical formulation comprising the crystalline form of claim **1** and at least one pharmaceutically acceptable ingredient.

**28**. The pharmaceutical formulation of claim **27**, wherein the crystalline form is unsolvated.

**29**. The pharmaceutical formulation of claim **28**, wherein the crystalline form has a TGA thermogram substantially similar to the one set forth in FIG. **4**.

**30**. The pharmaceutical formulation of claim **27**, wherein the DSC thermogram was generated by heating the crystalline form at a rate of 10° C./min.

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